Silvertel

Ag201
Evaluation Board
User Manual

Version 1.0 – July 2017

1   Table of Contents

2   Table of Figures

3 Introduction

This manual is intended to be a guide to using the "EVALAg201 Evaluation Board" with a Silvertel Ag201 LED driver module. The Ag201 input voltage can be either higher or lower than the string (output) voltage, allowing for ease of design with a wide range of DC input voltages and LEDs.

4 Board Description

4.1 Input

The EVALAg201 evaluation board should be powered using a DC power supply (not provided) delivering between +12V to +57V. The power supply should be connected to the screw terminal labeled JP1 with the positive connected to pin 1 (marked +12-57V) and 0V to pin 2 (marked 0V).

If a jumper link is fitted to LK2 then LED1 will be illuminated indicating that the Ag201 is powered.

4.2 Output

An LED with a string voltage ranging from 2V up to 34V can be connected to the screw terminal labelled JP3 with the Ag201 able to provide a maximum power of 24W[1] to the LED.

1.Please see Table 3 in the Ag201 datasheet for maximum LED power.

4.3 Output Current Selection

The EVALAg201 has 4 selectable constant current outputs: 350mA, 500mA, 700mA and 1000mA. These are selected by placing a link on the appropriate pair of pins on connector J1 before power is applied. Once powered the constant current LED output setting cannot be changed unless the Ag201 is power cycled.

4.4 Dimming Control

The brightness of the LED can be controlled in two different ways using either the 0-10V or DALI inputs via the screw terminals JP4 and JP2 respectively. The Ag201 will power up with 0-10V control as default but if the Ag201 detects a DALI bus then the Ag201 will automatically switch to DALI control*.

*Please see section 6 of the datasheet for full explanation of the Ag201 dimming control.

4.4.1 0-10V Dimming Control

The EVALAg201 has an on board potentiometer to demonstrate the basic 0-10V dimming capability. By fitting the jumper link on LK1 to position A the brightness can be dimmed from 100% down to 5% before switching off.

Additional control of the LED brightness can be made through the screw terminal JP4, offering the user the ability to connect an external 0-10V controller. If the user chooses this option then jumper link on LK1 should be moved to position b as shown in Figure 1 below:
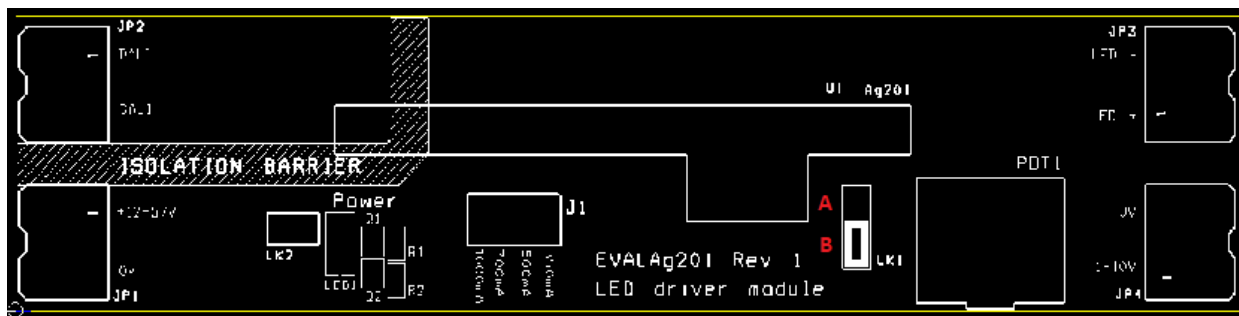

Figure 1: LK1 Jumper Link Position

4.4.2 DALI Control

When the EVALAg201 is connected to a DALI bus via screw terminal JP2 (polarity independent) the Ag201 will go into DALI control mode. In this mode the Ag201 will respond to DALI commands and adjust the LED brightness accordingly.
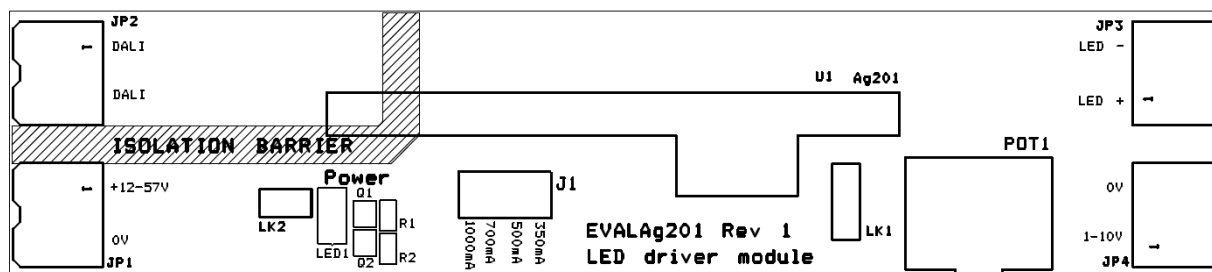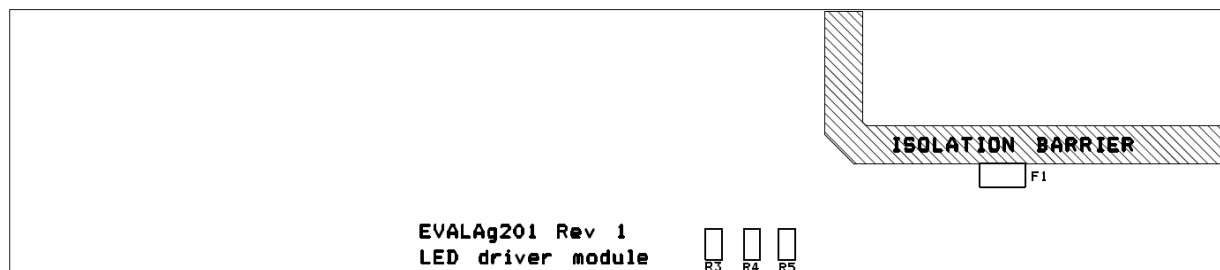
5 Board layout

Figure 2: EVALAg201 Board Layout Top

Figure 3: EVALAg201 Board Layout Bottom